

Quantum Gravity Demystified

The empirically-based (unlike extra dimensional speculative string "theory") and predictively-proved mechanisms of the Standard Model's quantum field theory, quantum mechanics, dark energy and gravity



NIGE COOK AND NIKA TALBOT

APR 12, 2024



2



1

Share

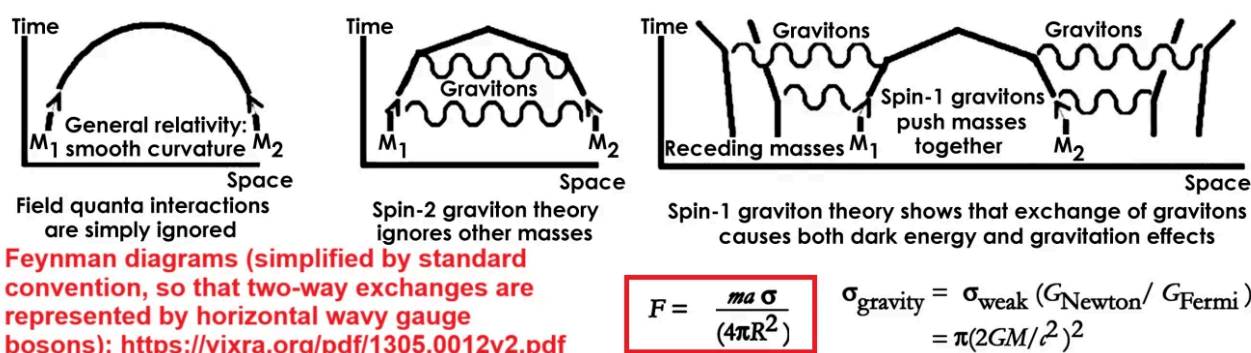


Fig. 1. Taken from the 1-page simplified paper <https://vixra.org/abs/1305.0012>. Note that only gauge bosons causing net forces are shown in the “spin-1” vector boson exchange diagram on far right. Clearly, all masses exchange gravitons (so M_1 and M_2 are exchanging gravitons), but because they’re fundamental particles and thus are “relatively small” compared to mass of surrounding universe (by “relatively small” we mean $\sim 10^{-80}$ of the mass of the universe) their “mutual repulsion” can be discounted as insignificant due to their very small cross-sections for graviton interactions. Not so when the gravitons from the 10^{80} times bigger mass of the surrounding universe is considered! So “critics” of such trivia can go f--- off (the underlying full dynamics are extremely complex, but our simplification for calculational purposes is fully justified and any pseudo “critics” are plain wrong).

CHAPTERS LIST WITH CHAPTER CONTENTS SUMMARY (BRIEF!)

1: *Mechanisms for quantum field theory diagrams and the Feynman 1985 book QED Euclidean “path integral”*. A summation of real wavefunction path amplitude $\cos S$, for all straight-line-between-interaction path graphs, distinct from his earlier complex space path integral of amplitude: $\exp(iS) = i \sin S + \cos S$ (Euler). It is also distinct

from his earlier 1965 book with Albert Hibbs on the path integral for foregoing the earlier fake news “no go theorem” against straight line virtual paths; namely the reductionist fallacy “tought experiment” of drilling away more and more holes in more and more screens between a torch and a photon detector. According to this 1965 reductionist fallacy of Feynman and Hibbs (done away with by Feynman in his later 1985 book QED), the virtual photons end up going on curly paths (not straight lines between interactions) because the electrons at the edge of slits that physically provide the mechanism for the diffraction of light will cause more and more chaotic perturbations as you remove them. The situation after Feynman discussed this in the 1970s with David “hidden variables” Bohm was that, no, this doesn’t actually happen and is the world’s greatest example ever of the “reductionist fallacy” of metaphysics: when you completely “drill away” all the imaginary screens by making an infinite number of holes in them, the hole edges (real electrons) get lost, and the amount of random deflection of paths drops from the “infinity” of Hibbs and Feynman (1965 book) to absolutely ZERO. So as the angry folk say, “get lost please!” Reality is simple after all.

The clear way to proceed, is simply by updating the purely electromagnetic interaction Hamiltonian in the old “well established” 1920s Klein-Gordon equation of quantum field theory for bosons with a unified field (i.e., electromagnetic, plus weak, plus strong plus dark energy, Hamiltonian), prior to taking the “square root” to get a corrected Dirac equation for fermions.

It’s now obvious that the field energy hamiltonian used by Klein-Gordon equation for bosons and (badly) “square rooted” into the fermionic Dirac spinor, is fake news because it doesn’t intrinsically include the partitioning of field energy into the various fields other than electrodynamics, which are now known and included in the standard model. E.g., you need to begin again with a hamiltonian which partitions the energy of the various fields into QED, weak, and strong interactions for a quark, and then you can find how to shut off the strong interaction for leptons. The way to do this is a difference between quarks and leptons, e.g. the former only exist in pairs or triplets unlike the latter, so then you have a way to build a model: close proximity and shared vacuum polarization fields gives you a bootstrap unification with emergent gluons under such circumstances, providing a testable, predictive unification mechanism.

Dr Woit's [29 August 2024 Not Even Wrong weblog post "The terrifying power of mathematics"](#), [quoting Feynman's 1947 letter on the mystery of the Dirac equation](#), sums up why the mainstream isn't thinking clearly. It's a dizzy mix of religious dogma and fashion dogma, that prevents rethinking the foundations.

Our recipe, [thanks to a discussion with Dr Robert A. Wilson at his blog post "The Limits of Newtonian Physics"](#):

1. Take Klein-Gordon Hamiltonian of QED bosonic fields.
2. Add to it nutritious extra energy terms for nuclear force field bosons (weak bosons, strong colour gluons, dark energy boson, Higgs boson?), with correction factors for unification (conversion of QED gauge boson field into these other weak and QCD bosons due to vacuum polarization mechanism)
3. Take the "square root" of that Hamiltonian (trying to avoid Dirac's disaster of assuming negative mass aka negative gravitational charge, in the process) to obtain unified fermion field "corrected Dirac equation" spinor matrixes.
4. Interpret the resulting matrixes in terms of gauge groups, including correct mixing parameters, symmetry breaking mechanism predictions.

The nature of the "correction" factors here is key. Taking the analogy of "gene switching" in genetics theory, early genetics theory (Mendel's analysis) claimed that are somatic cells (i.e. all cells excepting reproductive cells) have two sets of DNA in their nuclei, one "dominant" and the other "recessive", i.e. analogies to an on/off switch in a fixed position determined God-knows-when by God-knows-what! Mathematically, this is identical to the real Dirac matrix elements 0 and 1. But in recent decades, gene switching has been understood. E.g., you have two copies of genes responsible, gene TP53, for producing your DNA repair enzyme, the proteon P53. This is a complex protein that is easily damaged during cellular devision (reproduction of normal somatic cells, not the reproductive cells which only contain one set of DNA, not two like somatic cells). It turns out, a cell can switch dependence on which (of the choice of two copies in every somatic cell nucleus) DNA protein recipes manual it "chooses" to use" to produce the protein P53. Now, if both copies of gene TP53 in your skin cell are defective, there is no choice and you are "likely" to get cancer (depending on the extent to which your other back-up defense mechanisms such as cell apoptosis, or cell isolation by immune system, etc.) can suppress the fire. But if only one of the two copies of TP53 is defective, whether you get cancer or

not will in part depend on how effective your cell nucleus is at selecting which DNA copy to use when dividing. It turns out that chemicals like stress hormones, which send you into “fight or flight mode”, conserve your metabolism (energy use) by shutting down some of your energy-extravagant anti-cancer mechanisms, so there is an increased risk of defective (cancer prone) DNA being used to produce defective proteins when chronically stressed. The gene selection factors are then not simply 0 and 1, but a variable dependent on the amount of stress hormone cortisone, etc. (Note that cortisone is not automatically always a “bad guy” that suppresses your immune system: sometimes it may be needed to help you, for example if short on food it will reduce your metabolism and you will need less food, and in certain types of injury it will reduce over-inflammation problems like allergic reactions, where without cortisone the uncontrolled swelling of tissues can compress blood vessels and cut off vital blood flow to tissue, killing it. Biology is complicated.)

By analogy, regarding the conversion of part of one field into another by a vacuum polarization (charge shielding) mechanism: are the elements in the Dirac (and gauge group) matrices really simply the quaternion factors, +1, 0, -1, i ? Surely the physical mechanisms of mixing and running couplings (vacuum polarization shielding of electric charge, to produce virtual particles that can mediate nuclear fields, for example) suggests that such simplistic factors must be either multiplied by or replaced by a variable, e.g. $\exp(-x)$, or $\exp(-ix)$ where x is a function of interaction energy or distance from particle cores. You could still use the simple quaternion elements, but just multiply all the usual (0, -1, +1, i) elements by an exponential multiplication factor to account for the gradual changes in shielding from vacuum polarization, which modifies the effective charge and thus the conservation of total energy in any given field (electromagnetic, weak/strong nuclear, dark energy). These exponential factors will then theoretically yield the empirical mixing amplitudes normally put into the SM by hand (fiddling it to fit data). The bottom line here is this: the SM is just an empirical model. Is it possible to find a theoretical basis for it that predicts everything, simply by correcting the old 1920s pre-SM theories of Klein-Gordon and Dirac?

If you “shield” the Coulomb electromagnetic field by vacuum polarization (the renormalization of charge), what happens to that “shielded” field energy? It must go into creating the nuclear forces (plus dark energy field?). If the overall shielding of

the Coulomb charge's total effective energy (i.e. the field energy density integrated over volume) is represented by, say

$$\exp(-x)$$

where x is a function of the energy or distance limit or “cutoff” on the integration of energy density with volume. Then the argument above predicts that the two nucleon (weak and strong) forces will have an energy proportional to

$$1 - \exp(-x)$$

(possibly this will also include dark matter fields such as neutrinos, which may also be the basis for dark energy).

2. *Vacuum polarization and running couplings in quantum gravity.* A great chapter. Electromagnetic, weak and strong interaction charges (the Standard Model) come with anti-charges. So virtual fermions, which due to conservation of charge occur in pairs (matter and antimatter) above the pair production field strength threshold (infrared cutoff on running coupling), get radially polarized by the field in which they are formed. This causes them to absorb energy from the field and so move further apart than the distance given by Heisenberg's uncertainty principle for truly random pair production. In other words, the “virtual” pair is then not so virtual, lasting longer (on the average) than predicted by the uncertainty principle. This extra existence comes at the cost of energy depleted from the field of the real fermion in which they are formed (thus, the “shielding” of that charge by its “vacuum polarization veil”, causing the coupling to run between infrared and ultraviolet cutoffs, corresponding to larger and smaller distances or smaller and larger collision energies, respectively). We prove how this mechanism produces hadron and lepton masses, using a quantitative predictive model based on the analogy to the shell model of nuclear physics, where closed shells of 2, 8, 50 hadrons correspond to relatively high stability configurations. But there is also another aspect for this: what about the running coupling for quantum gravity? Remember, the charge for gravity is mass, and despite Dirac's SU(2) related mathsturbation in his spinor matrices, nobody has seen any gravitational charges falling upwards, matter or antimatter! So the populist assumption that the gravity coupling can run as the logarithm of energy or inverse distance (approximately), like Standard Model couplings suffers from the drawback that it's in conflict with what we observe. We need to

revise not only Dirac's spinor matrices (falsely supposed to be a "square root of the Klein-Gordon equation"), to correct the sign of gravitational charge, but also remove this horseshit from the foundations of supergravity theory, a cornerstone of Ed Witten's "Mathsturbation Theory or M-theory" which is promoted by quacks in our university pseudophysics departments.

3. *LeSage and the short ranged strong nuclear interaction mechanism.* Pion exchange between nucleons binds nuclei together, acting like an attractive force or "hadronic string". We show that this is the LeSage force mechanism. What's interesting is the reluctance of mainstream pseudophysicists to understand reality, preferring epicycle mathturbation quackery instead of clear and simple explanations of reality. Charlatans are exposed, named and shamed for conning Joe Public and turning nuclear physics into a mathsturbation occult few grasp.
4. *Electrodynamics, Casimir forces, dark energy, and cosmology.* Mechanisms for maths.
5. *Electroweak interactions, special relativity and quantum mechanics.* (ditto)
6. *Anomalies and correcting errors in the Standard Model.* A huge anomaly arose in quark-lepton unification theory when the W weak boson was introduced into Fermi's point scattering theory of weak decay in 1967. This gave us the handle or Rosetta Stone clue for understanding the errors in the Standard Model and correcting them, allowing prediction of Standard Model parameters from theory.
7. *Newtonian physics, Maxwell's electromagnetism, and general relativity hype.* All material in standard college pseudophysics is in need of corrections and revision due to the the simple Feynman multipath interference mechanism for "least action" (his 1985 QED book).
8. *Schrodinger's equation for 1st quantization or "quantum mechanics".* This piece of horseshit is well past its sell-by date and requires permanent consignment to the dustbin of history, and replacement by the mechanism of Feynman multipath interference (his 1985 QED book).
9. *Dirac's equation for 2nd quantization or "quantum field theory".* More horseshit, in which Dirac builds an electrodynamics theory of antimatter with negative masses (antigravity) contrary to observation, not to mention the problem of the large excess of "matter" over "antimatter", as he defines it. We provide the reality to replace Dirac's lies.
10. *Weyl's gauge theory and variation of Lagrangians for symmetry.* More 1st quantization horseshit: use of complex Hilbert space with $\exp(-iHt)$ to cover up

unobserved orbits, producing real Eigenvalues which quantize orbits and line spectra, etc. All the unobservables are simply dumped into complex space in Weyl's theory and its later use in both 1st quantization quantum mechanics, and also pre-1985 quantum field theory which uses amplitudes in complex space, $\exp(iS)$ rather than real space path amplitude $\cos S$ for quantum field theory or $\cos(-Ht)$ for a path in quantum mechanics. In fact, 2nd quantization multipath interference (not requiring complex space) provides a physical mechanism: the discrete Eigenvalues are simply the UNcancelled action solutions REMAINING after multipath interference! While Lagrangians can be varied to find symmetries (conserved charges), the Maxwellian and Einstein general relativity Lagrangians are based on the false classical least-action principle of physics, and don't necessarily correctly model energy flow along other paths with higher action. This means that, for example, the general relativity Lagrangian is subject to the "reductionist fallacy" of only assuming gauge boson exchanges on the least action path, making it totally unsuitable for use in determining the spin of the graviton for universe with many masses! Thus the 1939 Pauli-Fierz "proof" that gravitons are spin-2 is false. It is proved that the correct graviton spin is not spin-2. The proof is verified by the accurate prediction of dark energy ahead of its discovery, a fact covered up by quack mainstream pro-string theory (spin-2 graviton liars bias) journals!

11. *Yang-Mills gauge theories and their global symmetries.* Mechanisms for maths.
12. *Feynman diagrams, Feynman's path integral, and its expansion.* Mechanisms for maths, comparing shit calculations using Feynman's 1965 complex amplitude $\exp(iS)$ to those using Feynman's 1985 real amplitude $\cos S$.
13. *Propagators, running couplings, masses and renormalization.* Comparison of complex pole Fourier integrals of amplitudes $\exp(iS)$ to real space Laplacian integrals of amplitudes $\cos S$. The former leads to pages of abstruse obfuscation, while the latter leads to a full prediction of things like particle masses that can't be obtained from the former fog of mathsturbation. Enough said.
14. *Spontaneous global symmetry breaking by a Higgs field.* Despite its anomalies and epicycle type ad hoc parameter fixes (inputs of CKM matrix flavour changing amplitudes, particle masses, etc.), and its false reliance on complex space path integrals, the Standard Model, when corrected, is a step on the road to reality. In the Standard Model, the breaking of electroweak symmetry $SU(2) \times U(1)$ by a higgs "scalar boson" produces electrodynamics. This is in fact intimately

connected to the Dirac spinor $SU(2)$ matrices negative gravitational masses problem, and the weak force chirality problem. Peter Woit has suggested that the correct theory is $U(2)$ which, in 4-dimensional spacetime, gives a chiral $SU(2) \times U(1)$. It is also of interest that $U(3)$ similarly gives $SU(3) \times U(1)$, where the extra $U(1)$ could be considered a basis for a “dark energy” gauge theory whose spin-1 boson produces gravity in a LeSage or Casimir plates “pushing together” field. A few other possibilities are explored, too, together with the needed research programme for establishing a modern final theory of fundamental interactions.

15. *General relativity's cosmology compared to quantum gravity.* The spin-1 type quantum gravity theory discussed in detail in this book accurately predicted dark energy prior to observational confirmation by Perlmutter in 1998, a fact suppressed by mainstream quack journal editors and so-called “peer” reviewers (string theory cranks). We discuss additional quantum gravity predictions, e.g. the flattening of early time origin cosmic background radiation ripples by the the weak gravity coupling which quantum gravity theory predicts for 300,000 years time. This was originally dismissed using a false “no go theorem” claim by Edward Teller in 1948. We prove Teller’s “no go theorem” was identical to the compression fusion bomb “no go theorem” he used to hold up H-bomb development until March 1951! Teller simply made a false implicit (not explicit) assumption about the nature of quantum gravity! Another very significant prediction is a radical late time (future) departure from the mainstream Lambda-CDM cosmology, where large gravity coupling develops. What’s interesting is to view the Big Bang like a 10^{55} space burst nuclear explosion with the correct quantum gravity inserted, and see what happens to the balance between “dark energy” and the kinetic energy of real particles over time. The results lead to discussion of cosmological time in the context of Penrose’s “time reborn” argument for explaining time zero.
16. *Supersymmetry unification groupthink versus alternative ideas.* This chapter is about wars and revolutions, terrorism and freedom, censorship and heresy, no-platforming and other forms of political intimidation in pseudophysics, bringing in knowledge from other forms of conflict, war, and politics to help understand what the fuck is going on. “Freedom of the press” is considered fashionable propaganda, groupthink religion, or simply the freedom of mob rule, aka anarchy. Personal experience of trying to get any fucking interest in real world quantum gravity for the past fucking 40 years are recounted with some bitterness. The mathematics and alleged physics foundations (almost all proved

to be fake news) of supersymmetry unification are discussed, along with the problems of mainstream “critics” such as Dr Peter Woit, Dr Lee Smolin, and others. The author had extensive and bitter experiences of dealing with electromagnetic theory “critic” Ivor Catt, which throws light on some of the bad dealings which go on in the development of “alternative theories” which themselves are liable to degenerate into dogmatic, elitist, pseudophysics. Catt made some progress in showing how a capacitor is really a transmission line, but then refused to help develop it, instead making up false claims about disproving electric current which dragged down anyone who tried to advance the science. The stresses of waging war against mainstream pseudophysics leads alternative ideas into certain perils in no-mans land. These serious problems are analyzed and put on the record.

17. *No-go theorems based on speculative conjectures, not hard facts.* Aristarchus of Samos came up with the original version of the solar system with spinning earth in 250 BC, but was falsely “debunked” by mainstream cosmologist Ptolemy, who claimed to have what would now be called a “no go theorem” against a spinning earth: the rotation rate of 1000 miles/hour at the equator of the earth would, claimed Ptolemy, throw people off the planet! The correct laws of motion were put forward by Newton, 1500 years later. They showed Ptolemy’s claims false. However, the mainstream even today comes up with extremely indefensible and spurious “no go theorems” to ban “alternative ideas” to well-funded mainstream theories, instead of investigating the facts. These are really just propaganda efforts to hold up genuine progress and protect status quo for reasons of mainstream kudos or financial funding. Examples of fake news “no go theorems” are given to show how, after ignoring a new idea completely for decades, lying is then used blatantly to suppress progress which is damaging to mainstream hubris.
18. *Unified field theory or Standard Model without ad hoc parameters.* Examples of the state of the art of an alternative unified field theory with predictions are given, and compared to the ad hoc mainstream Standard Model and also M-theory.
19. *Fascism or should we say eugenics style fake news and propaganda lies.* Labour MP Sir Gerald Kaufman has been publically quoted by police commissioner Tony Lloyd as formulating “the golden rule of politics: never kick a man until he’s down!” In honour of Kaufman, this golden rule of politics is extended to pseudophysics. We get M-theory down, then we kick the shit out of it until it stops ranting lies.

Taking the analogy of eugenics pseudoscience, the basis of Adolf Hitler's *Mein Kampf* volume 1 (ah, Godwin's Law goes in chapter 19), why the fuck was Darwin's cousin and leading eugenicist Sir Galton and a whole load of quacks allowed to publish this lying shit in the first place in Britain? Elitism. Elitism. Elitism. So where the fuck are the "equality communists" in fighting this elitism? Answer: there are no fucking "equality communists"! The people who call themselves "communists" are fake communists aka charlatans, interested only in money equality, not in human values equality. You see them today campaigning like Hitler for the extermination of the Jews, on the same fake news basis as Hitler, i.e. the Jews are deemed to have some pennies saved up somewhere, which should be "liberated". Or their homeland of 3000 years should be given up, etc., etc. It's all fake, but does BBC "fact check" propaganda expose it? No way. It's ironic since the founder of their beloved "Marxist economics" was a Jew. But that never worried either Hitler or even Stalin, who actually murdered more Ukrainian Jews in his 1930s collectivization of farms than Hitler did in his gas chambers. Another example of pseudoscience is nuclear weapons effects and credible invasion deterrence to prevent wars, plus practical low cost civil defence shelters to not just make deterrence more credible, but to provide protection in a disaster, as well as convenient energy-efficient (well insulated!) underground accommodation without a blot on the landscape, to solve the housing crisis. Completely taboo, for pseudophysics reasons of many insane kinds!

20. *Time travelling for beginners or a simple way to meet your maker.* After 19 heavy duty chapters, here's a light ending: does the universe end with a bang (as in disarmament propaganda!) or a whimper (as in T. S. Eliot's poem!)? It is possible to understand the nature of "god" using the proof checked quantum gravity and unified field theory of this book. The new results here go back to space-time symmetry. Dirac's equation departed from the previous Klein-Gordon equation by the need to put space and time on an equal footing. Feynman's diagrams for symmetries in quantum field theory interactions show one dimension of space and one of time, again a neat symmetry. But Lunsford showed that progress arises from treating each spatial dimension as having a corresponding timelike dimension, thus 3 spatial and 3 timeline dimensions (which all look similar from our perspective, since the universe is extremely isotropic around us, so the ages of the universe derived from observations of the Hubble parameter in three perpendicular directions are all similar!), a symmetry called $SO(3,3)$. What about

the path integral? Can we consider that what we see to be a single big bang is really a kind of “least action” result from multipath interference of multiple versions of the big bang? This is not the same as previous “multiple universe” nonsense based on the false non-relativistic, single-wavefunction 1st quantization quantum mechanics gibberish, or the 10^{500} different metastable compactifications of 6 extra stringy spatial dimensions into a Calabi-Yau manifold of Planck scale. If this sounds like nonsense to you, yes, it does to us too. But lots of advances in science have been unexpected seemed impossible until tested and found to work. Is it possible to test this theory? Also, what are the “initial conditions” of the big bang in this non-classical theory of quantum gravity and unification of forces? Do they differ from the end-conditions given by Penrose’s “time reborn” theory, that would constitute a further big bang? Also, this gets into nuclear war survivability. I cook pies and cakes using an oven at 200 C and put my hand in for a few seconds to check the crusts are done, without hands being “instantly vaporized”, despite all the anti-nuclear war propaganda lies that water “supposedly” vaporizes at 100C. Water (70% of your hand) only “instantly vaporizes” when it’s temperature reaches 100C, which is entirely different from saying that when water is engulfed by AIR at 200 C, it instantly vaporizes! There’s a “small problem” of the heat energy transfer rate between the hot fireball air and the object engulfed by it, which delays the latter from achieving the temperature of the former! DUH! According to anti-nuclear war propaganda pseudophysics, my hand would be vaporized every day because the water in it would boil off. But there isn’t time. Hot air is a good insulator, so the rate of energy transfer is too slow to burn by hand for a couple of seconds. Sure, if I held my hand in the oven for a minute I would get a bad surface burn, and in 10 minutes it would be cooked (not vaporized) like a piece of meat. The point I’m making is that a nuclear fireball expands and cools fast so it doesn’t stay hot long enough to vaporize everything within it (e.g. secret classified fallout particle slide sections show unaltered coral calcium carbonate in the core, and a layer of heated and altered calcium hydroxide surrounding that unaltered core; for silicate bursts, like the Trinity test, you get assemblies of surface-melted sand grains, weltd together into large rough pieces of “trinitite”). Applying this principle to a 10^{55} megatons big bang, it is a simple matter to calculate how much protection is needed for the contents of a “time capsule” to survive surface ablation of the capsule while the big bang cools down. [The implication here is since a true theory of quantum gravity will differ

- due to quantization of fields - from the classical differential equations cosmology, there won't be singularity in the big bang any more than there was a singularity in any nuclear test in space in 1962 or in any supernova explosion ever observed. If so, then a "time machine" will simply consist of hardened "time capsule" in the form of a space craft with ablative "re-entry shields" capable of withstanding the fireball conditions of the big bang. If time is really "reborn" at time zero for each 10^{55} megaton explosion, you would expect not only to be able to send a time-capsule forward in time into another big bang, but also to receive one (or more) from the previous big bang. So this theory, if correct in technical detail, predicts the possible existence of time-machines carrying complete confirmatory information about everything, aka "god", which should appease the nutcases who like sci-fi "theory".]

Background information. Some papers (string "theorist" censors like Distler et al at arxiv deleted the original key QG paper uploaded to arxiv using my university email address in 2003, so I've put papers on vixra instead which doesn't censor advances without giving a justifiable reason) can be found at <https://www.google.com/search?q=nige+cook+vixra> or https://vixra.org/author/nigel_b_cook

Key papers for *briefly* summarizing evidence for advances are:

- (1) <https://vixra.org/abs/1305.0012> **Quantum Gravity is a Result of U(1) Repulsive Dark Energy**
- (2) <https://vixra.org/abs/1408.0151> **Massless Electroweak Field Propagator Predicts Mass Gap**
- (3) <https://vixra.org/abs/1301.0187> **Einstein's Rank-2 Tensor Compression of Maxwell's Equations Does not Turn Them Into Rank-2 Spacetime Curvature**
- (4) <https://vixra.org/abs/1301.0188> **The Quantum Gravity Lagrangian**

Longer papers with more outrage at the string "theory community" promotion of bullshit while censoring genuine advances:

- (5) <https://vixra.org/abs/1405.0274> **Self Consistent Automatic QFT Predictions of Particle Masses**

(6) <https://vixra.org/abs/1111.0111> U(1) X SU(2) X SU(3) Quantum Gravity Successes [a very lengthy manifesto, worthy of being nailed to the doors of physics departments]

There is also some material at my Quantum Field Theory domain (run since 2006): www.quantumfieldtheory.org (note that it is only the top result if specifically searched for on google e.g. <https://www.google.com/search?q=quantumfieldtheory.org> and is totally censored out by the mainstream fallacy-filled junk books and websites repeating disproved liars if you do an even slightly more general search like <https://www.google.com/search?q=quantumfieldtheory> which is VITALLY IMPORTANT for understanding how these advances are being stifled by groupthink “mathsturbation” crap), and a large stack of unpublished material for a book which is being prepared for submission to the editor Nika Talbot.

This project began with a physics conversation with my father in 1982, aged 10; he already had the basic idea but it was left to me to work out the mathematical detail and try to publish it to debunk “string theory” nonsense by proving the correct quantitative prediction of quantum gravity accounts for 100% of observed gravitation, leaving no room for spin-2 graviton contributions! He was clear on the distinction between classical general relativity and quantum gravity, a vital fact paid lip-service to by mainstream string theory cranks, but ignored mathematically (it leads to the spin-2 graviton “reductionist fallacy” of assuming that only two masses exist in the universe “for purposes of analysis”!), an error of utter stupidity that even “string critics” like Dr Peter Woit and Dr Robert A. Wilson seem to [prefer to ignore!](#)

QUANTUM GRAVITY DEMYSTIFIED

Chapter 1: Mechanisms in quantum field theory diagrams and path integrals

[NOTE: the key background for Chapter 1 is footnote 13 on page 62 of <https://vixra.org/pdf/1111.0111v1.pdf> which debunks mainstream lying hubris on Feynman path integrals, Feynman’s debunking of mainstream QM crap quoted on p 59 of the same paper, Fig 36 on p47, and column 1 on p46, plus Fig 34 on p44.]

1.1 To understand the basis for an empirical theory, it helps to know its historical development in some detail. The purpose of this chapter is to introduce the fundamentals, pointing out clearly some key errors and their solutions along the way.

1.2 The first gauge theory of quantum gravity was proposed by mathematician Hermann Weyl in 1918. It was provably wrong, but its mathematical structure, namely the use of the periodic real eigenvalue solutions of its complex gauge scaling factor, the exponent $\exp(iX)$, led to the development of Schrodinger's 1st quantization wave equation of quantum mechanics in 1926 (which was also wrong, being just a non-relativistic approximation soon superseded by 2nd quantization, aka Dirac and Feynman's quantum field theory).

1.3 Dirac suggested that a particle's wavefunction amplitude is $\exp(-iHt)$, then Feynman suggested multipath interference, a path integral where every possible path contributes a wavefunction amplitude $\exp(iS)$ where S is the action for a particular path (in dimensionless units of the quantum of action, \hbar). By summing the amplitudes for all possible paths, the correct probabilities (and cross-sections) were obtained. This was still very empirical; these equations were not derived from an axiomatic mechanical theory. They were, in Feynman's own words, "guessed" to fit the facts. Still, they worked very well and path integrals form the foundations of the Standard Model of particle physics, which reliably summarizes all the extensive data on strong nuclear, weak nuclear and electromagnetic interactions, using only a relatively small number of empirical force couplings, mixing angles and masses as inputs.

About the author. It is utterly pathetic that ideas are judged by their originators background, but such is the case in science and many other subjects, so we have to cater for such people. To understand this attitude (before giving out personal information and being damned by *ad hominem* pseudo "critics" for not being a card-carrying QFT or string theory paid crank protected by some university's ivory tower), in 1961 Herman Kahn's 1960 radically innovative book on *the nuclear deterrence of war in general* (not merely "massive retaliation" to deter all-out "doomsday" attacks, as was the previous policy by Dulles) was "reviewed" by controversial lawyer James Roy Newman in *Scientific American*.

Newman, a complete bastard to Britain - he drafted the notorious and paranoid McMahon 1946 US Atomic Energy Act, which illegally and unilaterally ended Britain's wartime agreement to continue postwar collaboration on nuclear energy - hadn't read Kahn's book (any more than he had read the vital Churchill-Roosevelt Hyde Park agreement for post-war continuation of nuclear collaboration of September 19, 1944 or consulted the UK government on the topic, when drafting the

quack Atomic Energy Act passed by Congress in 1946!), and just scanned the first part of Kahn's On Thermonuclear War briefly and taken some quotes and tables out of context to criticise (despite the title, its purpose is the credible deterrence of major provocations, not just the fighting of WWII if deterrence fails). Moreover, he denied the existence of the author, because the publisher hadn't provided much biography! We don't need that kind of abuse from such bigots, do we?

If you read my longest paper, <https://vixra.org/abs/1111.0111>, you will see on page 24 that - contrary to 100% of popular QFT textbooks - the real inventor of QFT wasn't the fool Dirac but rather the Nazi physicist Pascual Jordan, author of 1927 paper 'Quantization of Wave Fields,' who was suppressed for his politics. This story proves the importance of "tin hats"! But there is also the problem that if you go on about your background at the beginning of a book or paper, useless pathetic bigoted "peer reviewers" (as if they're "peers") will complain that they want to read physics, not biography. In other words, whatever you do, you're fucked, as far as mainstream bigoted shits are concerned. There are gonna be editing problems whatever happens. So here goes... there's a brief bio here: <https://nige.wordpress.com/author/nige/> but it omits personal background information, struggles with speech/hearing disabilities in childhood and resulting prejudice, etc. Not sure what interest this is going to be in such a book, but it is in a way relevant to explaining my intolerance to bigoted abuse.

UPDATE

Copy of a comment on the key problem here:

"It also makes it [string "theory"] a top contender until someone comes up with a more complete, or more testable framework. Lots of people definitely want that and are working on alternatives, but I don't think anything has obviously dethroned it yet." - Garrett Lisi at <https://www.math.columbia.edu/~woit/wordpress/?p=14144#comment-248074>

Interesting to see such propaganda based possibly on ignorance of proved QG and unification predictions in <https://vixra.org/abs/1408.0151> plus <https://vixra.org/abs/1305.0012> plus a range of other results at https://vixra.org/author/nigel_b_cook (calling such claims made by Witten, Lisi, Woit et al "propaganda possibly based on ignorance" is more charitable than calling it "lying", which implies they have seen the predictive proof tested results and are

denying them funding in some kind of deliberate conspiracy to suppress genuine advances, in order to promote pseudoscience fake news).

At some point this could escalate from disagreement to a higher order of conflict. It's disgusting ignorance if that is so.

(This comment was submitted to Woit's blog at <https://www.math.columbia.edu/~woit/wordpress/?p=14144&cpage=1#comment-248075> but based on previous recent experience, it will be deleted as "non-elitist" because it surely isn't "off-topic", in Woit's efforts to cover up the real scandal, which is why nobody is replacing string theory with proved quantum gravity that predicted dark energy accurately two years before its discovery.)

UPDATE #2 (28 September 2024) wow, wow, wow! Finally, some backing by the [eminient Professor Robert A. Wilson](#), the British [pure mathematical group theory expert](#), see his blog post "[The Limits of Newtonian Physics](#)" [linked here](#) (and also [here on internet archive](#), in case he changes his mind!):

“The papers of Zenczykowski that Mitchell Porter referred to in a comment on the previous post discuss possible relationships between MOND (Modified Newtonian Dynamics) on astrophysical scales and subatomic scales. ... the MOND mass, or quantum gravitational mass, is 50% bigger than the Newtonian mass. ... Mass itself is usually considered to be a scalar quantity (under the action of the Lorentz group), but in the Penrose twistor approach to quantum gravity (also followed by Woit), this scalar is joined to a Lorentz vector to make an $SO(2,4)$ vector. Such a vector is a product of two spinors or twistors of some kind, that is representations of $SL(2,C)$ or $SU(2,2)$, so it is these spinors that carry the square root of the mass. In other words, quantised MOND gravity is mediated by spinors, not vectors. In other words, by neutrinos. To calculate the MOND gravity, you just add up the neutrinos that arrive, in order to get the gravitational acceleration. This gives you more acceleration than if you just added up the Newtonian masses or the Einstein/Penrose vectors. ... But it does tell us that neutrino oscillations are key. **I am inclined to agree with Nigel Cook [emphasis added!]**, that the basic force caused by neutrinos is actually anti-gravity (dark energy, cosmological constant), and that the gravity that we observe is caused by a shielding of anti-gravity by massive objects getting in the way. Hence the more matter there is around us, the more shielding of anti-gravity, and the stronger the gravitational effects. ...”

Wow. Wow. Wow. Thank you. That's the first time I've ever had any expert support, although that doesn't mean I fully understand Dr Wilson's arguments (or that they are all 100% correct; *I'm not being ungrateful by saying this, just plain honest and worried in case the existing mainstream string dogma ends up replaced by another one*, as per Orwell's warnings in *Animal Farm*, 1984; we need to "be afraid, be very afraid" when theorising!).



2 Likes · 1 Restack



A guest post by

Nika Talbot

Founder | Writer @ The Shift newsletter | Grow the write way. Learning as I go and sharing what I know. More about me and my work at: nikatalbot.io. 🍷

[Subscribe to Nika](#)

© 2024 Nige Cook · [Privacy](#) · [Terms](#) · [Collection notice](#)
[Substack](#) is the home for great culture